

REMARKS/ARGUMENTS

At the outset, the Applicants wish to thank Patent Examiner Celia Chang for the many courtesies extended to Applicants' attorney during the Personal Interview on December 21, 2005, at the U.S.P.T.O. The substance of this Personal Interview is set forth in the Examiner Interview Summary and in this Amendment.

The amendments to this patent application are as follows. Each of the independent claims 1 and 11 has been amended in order to recite that from 2 to 5 mol equivalents of the hypohalite are used based upon the number of functional groups to be oxidized. Support for this added language is found on page 23 in the middle paragraph of the present Specification.

Reconsideration and withdrawal are respectfully requested for the rejection of claims 1-20 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 10/365,887 in view of *Li et al. '573, Merbough et al., US 6,498,269* and *Fritz et al. US 6,750,371*.

It is respectfully submitted that there is no overlap

regarding the subject matter of patent application Serial No. 10/365,887 and the present patent application Serial No. 10/667,810. This is because the Office Action of October 27, 2005 (Section 4), states that Serial No. 10/365,887 claims a process at a pH value of less than 7, while Serial No. 10/667,810 claims a process at a pH value greater than 7.

Also, the Applicants are filing herewith an Express Abandonment of U.S. Serial No. 10/365,887. Enclosed is a copy of this Express Abandonment.

Therefore, it is respectfully submitted that these two patent applications cannot overlap if there is a distinguishing feature, and such feature (here the pH value) is not a (sub)selection within a range but is an alternative range that does not overlap. Furthermore, how can these two patent applications overlap, if one of them (Serial No. 10/365,887) is no longer pending, because it has now been Expressly Abandoned.

Withdrawal of this double patenting ground of rejection is respectfully requested.

Concerning the *Fritz* prior art reference, the Applicants are filing herewith a Certified English translation of their priority German Patent Application No. 102 44 633.4 filed September 25, 2002. Thus, the Applicants have perfected their right of priority under 35 U.S.C. 119, since a certified copy of the priority document was previously filed on September 22, 2003, along with a Claim of Priority.

The *Fritz* U.S. Patent No. 6,750,371 has an effective date as a prior art reference which is equal to its U.S. filing date of October 4, 2002. Therefore, the Applicants' priority date of September 25, 2002, is prior to the reference date of OCTOBER 4, 2002, for *Fritz*. Thus, the *Fritz* U.S. patent is not prior art against the present patent application, and *Fritz* should be withdrawn as a reference.

Reconsideration and withdrawal are respectfully requested for the rejection of claims 1-20 under 35 U.S.C. 103(a) as being unpatentable over *Li et al.* U.S. 6,127,573 in view of *Anelli et al.* (1449), *de Nooy et al.* Ca 123:340678, *Harbeson et al.* CA 122:133766, *Brochett et al.* CA 132:152042, *Thaburet et al.* Ca 134:281053 or *Merbouh et al.* U.S. 6,498,269 and *Fritz et al.* U.S.

6,750,371.

With respect to the primary reference *Li et al.*, it should be pointed out that the teaching of *Li et al.* is directed to the alternative oxidation compound sodium chlorite. Contrary to this, the process of the claimed invention uses hypochlorite, i.e. sodium hypochlorite or its basic solution called "bleach." Example 1 in *Li et al.* uses sodium chlorite as a stoichiometric oxidant, while hypochlorite is only present in a catalytic amount (2 mol%) (also refer to cl. 9, line 34 "catalytic amount" and Abstract of *Li et al.*).

As stated above, the scope of independent claims 1 and 11 has been amended to recite the embodiment on page 23 of the Specification by integrating

...using 2 to 5 mol equivalents of hypohalite based on the functional groups to be oxidized... This should clearly distinguish over *Li et al.*, because *Li et al.* does not disclose a process using hypohalite as a stoichiometric oxidant.

Background information: It has been learned in the meantime that using less than 2 equivalents of hypohalite results in poor yields and selectivity.

Li teaches quite the contrary by proposing chlorites as stoichiometric oxidants and further by proposing to avoid hypohalites (and to use only catalytic amounts). But the use of chlorites is very dangerous, therefore the process of *Li et al.* is not performable in an industrial scale (cf. remark within Example 1 at *Li et al.*).

Furthermore, the comparative example of *Li et al.* (Table 1, cl. 4 entry 1h) using a known process (known from Anelli) does only lead to a 20% yield. There is no hint for the person skilled in the art how to overcome the low yield obtainable by the classic oxidation process other than using the oxidant proposed by *Li et al.* to obtain a yield of 80% (Table cl. 3, entry 1h). *Li et al.* gives no hint to the person skilled in the art, that the use of a continuous process will help to obtain higher yields without using dangerous chlorites as oxidants.

Other than stated by the Patent Examiner, it is not obvious to a person skilled in the art, that the application of a continuous process results in improved yields and selectivity automatically. It is quite the contrary and surprising for a person skilled in the art, that the change from a batch process

to a continuous process leads to significant improvements. Many chemical processes even cannot be implemented by continuous processing.

For the process in question, the **implementation of a continuous process is absolutely necessary** to solve the technical problem (which is known from *Li et al.* and *Anelli et al.*: poor yield) and to obtain good yields and selectivity. Please also refer to comparative example 1 (yield 46%, non-continuous) and the other examples within the present Specification (up to 90% yield).

Concerning all the secondary references, there is no disclosure in any of the cited documents which describes the continuous dosing of alcohol and hypohalite which is subject matter of independent claims 1 and 11.

Merbough teaches an oxidation process using halogen as an oxidant and which is not specific to any substrate at all. A person skilled in the art would not consider halogen as an oxidant for an unsaturated substrate. The only common feature with *Merbough* is the use of nitroxyl phase transfer catalysts in

a basic environment, which is also known from Li et al. (Example 1: pH8, TEMPO).

For all these reasons, the present invention, and all the claims, are patentable under 35 U.S.C. 103 over all the prior art applied by the Patent Examiner. Withdrawal of this ground of rejection is respectfully requested.

The Restriction Requirement should be withdrawn. This is clearly apparent since there was no Restriction Requirement in allowed Serial No. 10/365,887.

A prompt Notification of Allowability is respectfully requested.

Respectfully submitted,
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Enclosures: 1-Copy of petition, 3 month Extension of Time
2-Copy of Express Abandonment U.S.S.N.10/365,887
3-Certified English Translation of German Appl. No. 102 44 633.4

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Kelly Espitia



PATENTS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: STOHRER ET AL 2

EXAMINER: K. Puttlitz

SERIAL NO: 10/365,887

GROUP: 1621

FILED: FEBRUARY 13, 2003

TITLE: PREPARATION OF ALKYNECARBOXYLIC ACIDS AND ALKYNE
ALCOHOL ESTERS OF ALKYNECARBOXYLIC ACIDS
BY OXIDATION OF ALKYNE ALCOHOLS

EXPRESS ABANDONMENT OF APPLICATION 37 C.F.R. §1.138

MAIL STOP: AMENDMENT
Commissioner of Patents
Alexandria, VA 22313-1450

Dear Sir:

Applicants hereby expressly abandon U.S. Patent Application Serial No. 10/365,887, in favor of copending U.S. Patent Application Serial No. 10/667,810 filed September 22, 2003, so as to overcome a double patenting rejection.

Respectfully submitted,
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